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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/531,759	03/20/2000	Yoon Kwan Lee	P-093,	6134

7590

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EXAMINER

SANTIAGO, MARICELI

ART UNIT

PAPER NUMBER

2879

DATE MAILED: 07/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/531,759

Applicant(s)

LEE, YOON KWAN

Examiner

Mariceli Santiago

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 27 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 18-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,5,18,20,22 and 27-32 is/are rejected.
- 7) ☒ Claim(s) 2-4,19,21,23 and 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 20 March 2000 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8, 12.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

The Amendment, filed on March 27, 2003, has been entered and acknowledged by the Examiner.

Cancellation of claims 6-17 has been entered.

### ***Priority***

Submission of the translation of the foreign priority papers in accordance with 37 CFR 1.55 to overcome the rejection under 35 U.S.C. 102(e) over Yao et al. (US 6,482,062) is acknowledged. Accordingly, the rejection of claims 1-5 has been withdrawn.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5, 18, 20, 22 and 27-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Konishi et al. (JP 5,957,743, the Examiner notes that the US 5,957,743 is used in the rejection as an English translation of the Japanese reference).

Regarding claim 1, Konishi discloses a backplate of a PDP comprising a lubricant<sup>1</sup> thin film layer (10) formed on a front surface of the backplate (1) having barrier ribs (4), and a phosphor material (5) layer formed on the lubricant thin film layer. The Examiner notes that film 10 as disclosed by Konishi acts a lubricant film since it allows an even distribution of the

1. lubricant 1: a substance capable of reducing friction, heat, and wear when introduced as a film between solid surfaces. 2: something that lessen or prevents friction or difficulty. See Merriam Webster's Collegiate Dictionary 10<sup>th</sup> ed.

phosphor layer over the barrier ribs by reducing the surface roughness, the degree of absorption and unevenness of the barrier ribs surfaces.

Regarding claim 5, Konishi discloses a backplate wherein a material of a lubricant material has a refractive index above 2.0 (titanium oxide, refractive index 2.5-2.9).

Regarding claim 18, Konishi discloses a backplate wherein the lubricant film layer is formed on the backplate having barrier ribs to uniformly coat a phosphor material on the backplate irrespective of the shape and height of the barrier ribs.

Regarding claim 20, Konishi discloses a backplate of a PDP comprising a lubricant<sup>1</sup> thin film layer (10) formed on the backplate (1) having barrier ribs (4) to uniformly coat a phosphor material on the backplate irrespective of the shape and height of the barrier ribs, the phosphor material layer (5) formed on the lubricant thin film layer.

Regarding claim 22, Konishi discloses a PDP comprising a front plate, a back plate spaced across from the front plate (6), barrier ribs (4) formed on the back plate (1) facing the front plate (6), a lubricant<sup>1</sup> thin film layer (10) formed on a surface of both the back plate (1) and the barrier ribs (10), and a phosphor material layer (5) formed on the barrier ribs (4).

Regarding claim 27, Konishi discloses a PDP wherein the lubricant thin film forms a continuous film over both the back plate (1) and the barrier ribs (4).

Regarding claim 28, Konishi discloses a PDP wherein the surface of both the backplate and the barrier ribs where the lubricant thin film is formed comprises side surfaces of the barrier ribs (Fig. 1F).

Regarding claim 29, Konishi discloses a PDP wherein the surface of both the back plate and the barrier ribs where the lubricant thin film is formed comprises upper surfaces of both the back plate, where the barrier ribs are not located and the barrier ribs and side surfaces of the barrier ribs (Fig 1F).

Regarding claim 30, Konishi discloses a PDP wherein the lubricant thin film uniformly coats the back plate (1) and the barrier ribs (4).

Regarding claim 31, Konishi discloses a PDP wherein the phosphor material uniformly coats the back plate and the barrier ribs on the backplate irrespective of the shape and height of the barrier ribs.

Regarding claim 32, Konishi discloses a PDP wherein the phosphor material flows along the lubricant thin film coating the backplate and the barrier ribs on the backplate irrespective of the shape and height of the barrier ribs.

#### ***Other Prior Art Cited***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

#### ***Allowable Subject Matter***

Claims are 2-4, 19, 21, 23 and 24 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 2, 19, 21 and 23, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claims 2, 19, 21 and 23, and specifically comprising the limitation of the lubricant thin film being selected at least one of from the group consisting of diamond-like nanofilm composites, diamond-like carbons, MoS<sub>2</sub>, and polytetrafluoroethylene.

Regarding claim 3, claim 3 is allowable for the reasons given in claim 2 because of its dependency status from claim 2.

Regarding claim 4, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 4, and specifically comprising the limitation of a material of the lubricant thin film having a friction coefficient of below 0.06.

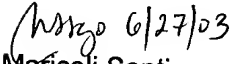
Regarding claim 24, claim 24 is allowable for the reasons given in claim 23 because of its dependency status from claim 23.

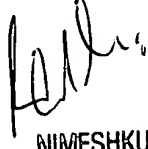
#### **Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mariceli Santiago whose telephone number is (703) 305-1083. The examiner can normally be reached on Monday-Friday from 7:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (703) 305-4794. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7382. Additionally, the following fax phone numbers can be used during the prosecution of this application (703) 872-9318 (for response before a Final Action) and (703) 872-9319 (for response after a Final Action).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

  
Mariceli Santiago  
Patent Examiner  
Art Unit 2879

  
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